



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,709	12/17/2003	Yong-Sung Ham	0630-1835P	5806

2292 7590 06/06/2007
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

CHACKO DAVIS, DABORAH

ART UNIT	PAPER NUMBER
----------	--------------

1756

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

06/06/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/736,709

Applicant(s)

HAM, YONG-SUNG

Examiner

Daborah Chacko-Davis

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17 and 19-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17, and 19-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 17 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U. S. Patent No. 6,722,760 (Jeong et al., hereinafter referred to as Jeong).

Jeong, in col 1, lines 12-15, in col 2, lines 1-67, and in figures 2A through 2C, discloses a pattern comprising providing a substrate wherein a plurality of panels and process-subjected layers are formed, wherein the substrate includes plurality of areas (forming display device on a large area of the substrate), providing a cliché with recesses (plurality of grooves), filling the recesses with resist, and transferring the resist formed in the recesses of the cliché to the process-subjected layer of the substrate by using a printing roll (transfer roll), with the same width (desired size) as that of the panel in the display device (substrate area), that rotates and contacts the surface of the cliché, and transferring the resist formed on the transfer roll to the process-subjected layer by rotating and contacting the surface of the process-subjected layer (claim 17).

Art Unit: 1756

The process limitations in claim 17 are noted. However, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

The disclosed product of Jeong and the instantly claimed product appear to be essentially the same, comprised of the same components, a pattern on the etching object layer, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claim 17 as opposed to the product taught by Jeong, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985).

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130 (b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-2, 4-17, 19-30, and 32, are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12, of U. S. Patent No. 7,140,296 (Baek et al., hereinafter referred to as Baek '296), and claims 1-17, of U. S. Patent No. 6,940,578 (Baek et al., hereinafter referred to as Baek '578) in view of U. S. Patent No. 6,001,515 (Evans et al., hereinafter referred to as Evans).

Baek '296, in claims 1-12, and Baek '578, in claims 1-17, disclose a method of forming a pattern comprising providing a substrate wherein a plurality of panels (LCD substrate with panels) and process-subjected layers (etching object layer) are formed, wherein the substrate includes plurality of areas (forming display device on a large area of the substrate), providing a cliché with recesses (plurality of grooves), filling the recesses with resist, and transferring the resist formed in the recesses of the cliché to the process-subjected layer of the substrate by using a printing roll (transfer roll), with the same width (desired size) as that of the panel in the display device (substrate area), that rotates and contacts the surface of the cliché, and transferring the resist formed on

Art Unit: 1756

the transfer roll to the process-subjected layer by rotating and contacting the surface of the process-subjected layer (claims 1-2, 5, 11-12, 17, and 19-20,). Baek '296, in claims 1-12, and Baek '578, in claims 1-17, discloses that the length of the resist to be transferred (blanket) is the same as the circumference of the transfer roll (cylindrical) which in turn is the same as the length of the panel (plurality of divided areas of the substrate) and that the cliché, and the transfer roll have the same size as that of the panel (divided area of the substrate) (claims 4, 6, 7, 13, 22, and 24-25). Baek '296, in claims 1-12, and Baek '578, in claims 1-17, discloses that the process-subjected layer (etching object layer) may be a metal layer, or a semiconducting layer or an insulating layer such as SiO_x or SiN_x (claims 8-10, 14-16).

The difference between the claims and Baek '296 and Baek '578 is that both Baek '296, and Baek '578, do not disclose that the resist in the grooves is formed on the blanket formed on the surface of the transfer roll (printing roll), and that the printing roll is rolled with the blanket on the cliché. Baek '296 and Baek '578, do not disclose that the printing roll with the blanket with the resist material is rolled thereon the surface of the etching object layer (claim 21). Baek '296 and Baek '578 do not disclose that the size and shape of the blanket (same circumference) is the same as that of the roll, and that the height of the blanket is the same as that of the printing roll (claim 23). Baek '296 and Baek '578 do not disclose that the area of the blanket is less than an area of the etching object layer (claim 26). Baek '296 and Baek '578 do not disclose that the area of the etching object layer is substantially a whole multiple of the area of the blanket (claim 27).

Evans, in col 5, lines 48-67, in col 8, lines 20-24, discloses that a transfer layer (blanket) is applied onto the collector roll (printing roll) prior to transferring the resist in the grooves (resist pattern) to the roll, transferring the resist pattern onto the transfer layer (blanket), and then transferring the resist pattern on the transfer layer by rolling the collector roll, with the transfer layer and the resist pattern on the transfer layer, onto the glass substrate (etching object layer). Evans, in col 9, lines 12-65, and in figures 4, and 5, discloses that the circumference and shape and height of the blanket (transfer layer) is the same as that of the collector roll's, and that the area of the blanket (transfer layer) is less than that of the etching object layer (glass substrate), and the area of the substrate is a whole multiple of the area of the blanket.

Therefore, it would be obvious to a skilled artisan to modify either Baek '296 or Baek '578 by employing a transfer layer (blanket), having the claimed dimensions, on the printing roll as suggested by Evans because Evans, in col 5, lines 32-46, discloses that the transfer layer on the printing roll behaves as an in-situ planarizing layer, and prevents the subsequent operation of forming a planarizing layer after the transfer to a substrate.

Conclusion

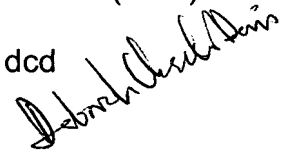
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

Art Unit: 1756

supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd



May 25, 2007.